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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
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EXAMINER
BOUCHARD, D

ART UNIT 3627 | PAPER NUMBER 39

DATE MAILED: 11/13/00

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This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

☒ Responsive to communication(s) filed on 8/17/99; Oct 6, 1999, Nov. 17, 1999, March 16, 2000, April 25, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-59, 64-105 is/are pending in the application.
Of the above, claim(s) 16-24, 36-38, 57, 58, 59, 32-33, 45, 53, 68, 73, 80, 90, 94, 98, 105 is/are withdrawn from consideration.
☒ Claim(s) 1-5, 6-10, 11-13, 34, 35, 101-104 is/are allowed.
☒ Claim(s) 14-15, 25-31, 39-44, 46-52, 54-56, 64-65, 70-72, 74-79, 81-89, 91-93, 95-100, 66-67, 69 is/are rejected.
☐ Claim(s) _____ is/are objected to.
☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
☐ The specification is objected to by the Examiner.
☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.
☐ received in Application No. (Series Code/Serial Number) _____.
☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of Reference Cited, PTO-892
☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 30, 39
☐ Interview Summary, PTO-413
☐ Notice of Draftperson's Patent Drawing Review, PTO-948
☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

★ U.S. GPO: 1996-421-632/40206

DETAILED ACTION

This office action is in response to Paper No. 26 filed August 17, 1999, Paper No. 27 filed October 6, 1999, Paper No. 28 filed November 17, 1999, Paper No. 32 filed March 16, 2000 and Paper No. 33 filed April 25, 2000. A petition to withdraw a restriction requirement filed July 10, 2000 was addressed in a decision filed September 19, 2000 (Paper No. 36). The elected invention in this application is best shown in Figures 8A to 8H and described in the specification on pages 18-21.

For the convenience of the applicant the current status of the 105 claims filed in this application is as follows :

Claims 1-5 and 12, 34 are allowable over the prior art of record.

Claims 6-10 and 13, 35 are allowable over the prior art of record.

Claim 11 is allowable over the prior art of record.

Claims 14 and 15 are rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claim 16-24 and 36-38, 57, 58, 59 are withdrawn as being drawn to a non-elected species.

Claims 25-31, 39-42, 55, 78, 79, 81-84 are rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claims 32-33 are withdrawn as being drawn to a non-elected invention.

Claims 43 and 44 are rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claim 45 is withdrawn as being drawn to an non-elected species.

Claims 46-49 are rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Aston 5,351,042 (Aston) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claims 46-52 and 54 are rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claim 53 is withdrawn as being drawn to an non-elected invention.

Claim 56 is rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claims 60 through 63 are canceled.

Claim 64 is rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claim 65 is rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claims 65-67 and 69 are rejected under 35 USC 103(a) as unpatentable over Sengupta et al. 4,807,454 in view of Gokcebay et al. 5,552,777 (Gokcebay) in view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claim 68 is withdrawn as directed to a non-elected species.

Claims 70-72 and 74 are rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claim 73 is withdrawn as directed to a non-elected species.

Claim 75 is rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claim 76 is rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claim 77 is rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claim 80 is withdrawn as directed to a non-elected species.

Claim 85-88 are rejected under 35 U.S.C. 112, second paragraph.

Claims 85-88 are rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claim 89 is rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claims 90 and 105 are withdrawn as directed to a non-elected invention.

Claim 91 is rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claims 92-93, 95-100 are rejected under 35 USC 103(a) as unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda).

Claims 94 is withdrawn as drawn to a non-elected species.

Alternatively, claim 98 is withdrawn as directed to a non-elected species.

Claim 101 is allowable over the prior art of record.

Claim 102 is allowable over the prior art of record.

Claim 103 is allowable over the prior art of record.

Claim 104 is allowable over the prior art of record.

Claim Rejections - 35 USC § 112

1. Claims 85-88 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 85, line 12, it appears that "blocking" should be --allowing--, since applicant's elected embodiment shows the locking member moving between one orientation blocking the side bar and a second orientation allowing the side bar to move relative to the cavity in the shell to rotate the barrel with respect to the shell.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 43 is rejected under 35 U.S.C. 102(b) as being anticipated by Gokcebay et al. 5,552,777 (Gokcebay). Gokcebay teaches all the elements of the claimed invention including cylinder 46, plug 24, elongate member (pin tumblers not shown, col. 6, lines 61-62), orifice (housing contact/conductor 28 shown in Figure 3), radially orientated aperture (houses electrical operator 36 with spring-biased (48) movable member 38), and electronic logic circuit (figure 2, col. 5, line 59 to col. 6, line 37). It is inherent in Gokcebay that the second end of the cylinder

lock is attached to some form of typical cam actuator (not shown). Also, Gokcebay is a continuing application of Gokcebay et al. 5,367,293 which shows a bearing surface and cam actuator.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 14, 15, 25-31, 39-44, 46-52, 54-56, 64-65, 70-72, 74-79, 81-89, 91-93, 95-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Thordmark et al. 5,542,274 (Thordmark) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda). Gokcebay teaches a mechanical/electronic key and lock cylinder 46 having plug 24, pin tumblers (not shown, col. 6, lines 61-62), orifice in the front face of the cylinder (housing contact/conductor 28 shown in Figure 3), radially orientated aperture (houses electrical operator 36 with spring-biased (48) movable member 38), and electronic logic circuit (figure 2, col. 5, line 59 to col. 6, line 37). It is inherent in Gokcebay that the second end of the cylinder lock is attached to some form of typical cam actuator (not shown). Also, Gokcebay is a continuing application of Gokcebay et al. 5,367,293 which shows a bearing surface and cam actuator. Gokcebay fails to teach a bar which moves radially to the axis of the lock plug

and the electronic operator having an electronic locking member which moves independently of the movement of the bar, side bar or elongate member which is reciprocated between a blocking and releasing position as a result of independent movement of the locking member. Thordmark teaches a cylinder lock having an electronic operator 12, a movable electronic locking member 11 which alternatively allows and blocks reciprocation of a spring-biased side bar 10. Specifically, Thordmark teaches at column 5, lines 38-47:

> FIG. 7 illustrates a modified embodiment in which the electric motor 12 is replaced with an electromagnet whose coil 17 is connected to the blocking element 11. The armature 18 of the electromagnet lies against a stationary part of the unit which includes the electric drive means. When the electromagnet 17, 18 is energized, the coil 17 is caused to move to the right in FIG. 7, therewith moving the blocking element 11 from its active latching-element blocking position shown in FIG. 7 to its latching-element release position.
>
> It will be understood that other types of electric drive means may alternatively be used.

Thordmark teaches the electrically actuated blocking element being mounted in the cylinder lock and not the plug. Gokcebay recognizes the existence of electro-mechanical locks having the blocking tumbler mounted in the cylinder casing like Thordmark. See Clarkson et al. 4,789,859. The object of the Gokcebay invention is to provide a system which is very easily retrofitted into lock systems having a single key operating a number of locks, and which avoids the need for electronics, solenoids or other hardware which would take up space within the coin box or the lock casing adjacent the lock (column 2, lines 49-55). Naveda reinforces that a person of general skill in the art of electro-

mechanical or magneto-electric lock systems at the time of applicant's invention would have know of the versatility and interchangeability of known electronic elements usable in verifying and actuating electric lock cylinders including among others, miniature coils, miniature electromagnets, electronic memories, bioelectric circuits, resistance plates and the like. See column 3, lines 1-13, column 4, lines 30-35. Furthermore, Naveda teaches that the electromagnet can be located in the receiver or alternatively in the body of the key having any size or geometric shape (column 4, line 60, column 9, lines 22-25). It would have been obvious to one of ordinary skill in the art to replace the simple blocking element of Gokcebay with the multi-part electrically actuated blocking element of Thordmark to thwart natural attempts to force system locks that are equipped with electronic blocking functions of the kind meant in Thordmark by making forcing of such locks more difficult (Thordmark, column 1, lines 38-42). It would have been an obvious reversal of parts and change of size to select miniature logic circuitry and a miniature solenoid and locking member 11 such that the blocking mechanism fits within a conventional sized locking plug as taught by Gokcebay and Naveda and the side bar extends into a groove in the lock cylinder to block rotational movement between the plug and the cylinder and the side bar within the grooves between protrusions 11a when in the non-blocking orientation to allow the sidebar to move completely within the lock plug and allow relative movement between the plug and the cylinder. Regarding claim 86, the circumferential surface of protrusions 11a is an obvious change of shape and some

amount of chamfering is inherent to prevent binding between the locking member and the side bar.

a. Claims 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gokcebay et al. 5,552,777 (Gokcebay) in view of Aston 5,351042 (Aston) and in further view of Gomez-Olea Naveda 4,416,127 (Naveda). Gokcebay teaches a mechanical/electronic key and lock cylinder 46 having plug 24, pin tumblers (not shown, col. 6, lines 61-62), orifice in the front face of the cylinder (housing contact/conductor 28 shown in Figure 3), radially orientated aperture (houses electrical operator 36 with spring-biased (48) movable member 38), and electronic logic circuit (figure 2, col. 5, line 59 to col. 6, line 37). It is inherent in Gokcebay that the second end of the cylinder lock is attached to some form of typical cam actuator (not shown). Also, Gokcebay is a continuing application of Gokcebay et al. 5,367,293 which shows a bearing surface and cam actuator. Gokcebay fails to teach a bar which moves radially to the axis of the lock plug and the electronic operator having an electronic locking member which moves independently of the movement of the bar, side bar or elongate member which is reciprocated between a blocking and releasing position as a result of independent movement of the locking member. Figure 4 of Aston teaches an electro-mechanical lock using a length of nickel-titanium wire 40 instead of the electromagnet arrangement of Figures 1 and 2. By passing electrical current through the wire the wire shrinks causing the lever 42 to disengage the plug from the cylinder casing. The

electronic locking member 40 moves in a direction different from the locking bar 42 and is located in the lock cylinder and engages locking bar 42 which coacts with a slot found in the plug. Naveda reinforces that a person of general skill in the art of electro-mechanical or magneto-electric lock systems at the time of applicant's invention would have know of the versatility and interchangeability of known electronic elements usable in verifying and actuating electric lock cylinders including among others, miniature coils, miniature electromagnets, electronic memories, bioelectric circuits, resistance plates and the like. See column 3, lines 1-13, column 4, lines 30-35. Furthermore, Naveda teaches that the electromagnet can be located in the receiver or alternatively in the body of the key having any size or geometric shape (column 4, line 60, column 9, lines 22-25). It would have been obvious to one of ordinary skill in the art to replace the solenoid of Gokcebay with the NiTi electrically actuated blocking element like that taught by Aston as a well known equivalent electrical release mechanism controlled by a circuit and equivalent to an electromagnet or solenoid. It would have been an obvious reversal of parts and change of size such that the blocking mechanism like that taught by Aston fits within a conventional sized locking plug as taught by Gokcebay and Naveda. The object of the Gokcebay invention is to provide a system which is very easily retrofitted into lock systems having a single key operating a number of locks, and which avoids the need for electronics, solenoids or other hardware which would take up space within the coin box or the lock casing adjacent the lock (column 2, lines 49-55).

6. Claims 65-67 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sengupta et al. 4,807,454 (Sengupta) in view of Gokcebay et al. 5,552,777 (Gokcebay). Sengupta teaches all the elements of the claimed invention except the electronic locking means being located within the cylinder plug and engaging a slot in the cylinder casing. Gokcebay teaches a mechanical/electronic key and lock cylinder 46 having plug 24, pin tumblers (not shown, col. 6, lines 61-62), orifice in the front face of the cylinder (housing contact/conductor 28 shown in Figure 3), radially orientated aperture (houses electrical operator 36 with spring-biased (48) movable member 38), and electronic logic circuit (figure 2, col. 5, line 59 to col. 6, line 37). It is inherent in Gokcebay and Sengupta that the second end of the cylinder lock is attached to some form of typical cam actuator (not shown). Also, Gokcebay is a continuing application of Gokcebay et al. 5,367,293 which shows a bearing surface and cam actuator. Gokcebay recognizes the existence of electro-mechanical locks having the blocking tumbler mounted in the cylinder casing like Sengupta. See Clarkson et al. 4,789,859. The object of the Gokcebay invention is to provide a system which is very easily retrofitted into lock systems having a single key operating a number of locks, and which avoids the need for electronics, solenoids or other hardware which would take up space within the coin box or the lock casing adjacent the lock (column 2, lines 49-55). It would have been an obvious reversal of parts and change of size to mount the logic circuitry as taught by

Sengupta

~~Gokcebay~~ and a miniature solenoid 10 and locking member 30 such that the locking mechanism fits within a conventional sized locking plug as taught by Gokcebay.

Response to Arguments

7. Applicant's arguments filed in the various Papers mentioned in the first paragraph of this office action have been fully considered but they are moot in view of the new grounds of rejection. Applicant should also note that the allowability of some claims have been withdrawn in view of the new art rejections. Also, some claims have been withdrawn from consideration by the examiner as being drawn to non-elected inventions and/or non-elected patentably distinct species. As repeatedly suggested to the applicant, this application contains allowable subject matter to the claimed elected species as claimed for example in claims 1 and 6 above wherein the solenoid and locking member is part of one of the tumbler pins and the locking member moves perpendicular to the axial length of the elongated sidebar and wherein a section of the sidebar engages a groove portion of the blocking bar when in the release position.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darnell Boucher whose telephone number is (703) 308-2492.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BethAnne Dayoan, can be reached at (703) 308-3865.

Submission of your response by facsimile transmission is encouraged. Group 3620's facsimile number is **(703) 305-3597**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence **not** permitted by facsimile transmission, see MPEP § 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check **should not be** submitted by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP § 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (703) 305-3597) on ____(Date)____

_____

(Typed or printed name of person signing this certificate)

_____

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP § 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Any inquiry of a general nature relating to the status of this application should be directed to the group receptionist at (703) 308-2168.

DARNELL BOUCHER
PRIMARY EXAMINER

November 7, 2000